

Remarks

Claims 32-36 and 41-43 are pending in this Application. Claims 1-31 and 37-40 have previously been canceled without prejudice. In the Office Action mailed November 28, 2007, the Examiner rejected Claims 32-36 and 40-43 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,419,742 (hereinafter "Kirk"). Applicants respectfully amend and request entry of amended Claims 32, 35 and 36. Applicants have cancelled Claim 34 without prejudice. The features of Claim 34 have been incorporated into amended Claim 32; as such, amended Claim 32 does not add new matter. Amendments to Claims 35 and 36 are directed to matters of form and/or to make more clear the features of the claimed invention. No new matter has been introduced with amended Claims 35 and 36. New Claim 44 has been added to further clarify features of the claimed invention and also does not add new matter.

With this paper, Applicants' submit a declaration document under 37 C.F.R. § 1.132 provided as factual evidence that Kirk does not make obvious Applicants' claimed invention. Applicants also submit that, contrary to a position taken by the Examiner, conditions of the claimed invention, such as creating a second surface on a (100) surface without dangling bonds, are germane to patentability of the claimed invention. Applicants, by way of an affidavit, make clear that essential conditions of the claimed invention, such as creating a second surface on a (100) surface of a semiconductor material (i.e., Group IV semiconductor materials) without dangling bonds, are not taught or suggested by Kirk and Kirk fails to arrive at the teachings of Applicants' invention. In particular, Kirk teaches nothing about creating a second surface on a silicon (100) surface without dangling bonds, as is claimed by Applicants' claimed invention. In fact, one of skill in the relevant art understands that the method and reaction taught by Kirk will always leave dangling bonds on the silicon (100) surface. As such, Kirk cannot be relied on for a showing of obviousness because the reference does not teach each and every element of Applicants' claimed invention, does not suggest each and every feature of Applicants' claimed invention and were one of skill in the art to read Kirk, there would be no motivation to arrive at Applicants' claimed invention because Kirk teaches an entirely different reaction than what is claimed by Applicants' claimed invention. Applicants further submit that, contrary to another position taken by the Examiner, the reactants relied on by Applicants with their invention are germane to understanding the claimed invention and to

determining patentability. Kirk teaches a very different reaction with different reactants that do not provide a specified (100) surface as claimed by Applicants' claimed invention. The Examiner maintains that Kirk provides the same construction as Applicants' claimed invention, which is entirely incorrect. Kirk does not provide and cannot provide a second surface without dangling bonds. None of the agents relied on by Kirk, including arsenic are capable of providing a second surface without dangling bonds. Evidence that Kirk fails to arrive at a second surface as claimed by Applicants' has been pointed out before (see Col. 5, ll. 5-7); Kirk must rely on depositing a second monolayer of zinc to prevent deleterious reaction at the surface passivated by arsenic. As a result, Kirk actually teaches away from Applicants' claimed invention. Clearly, there is no obvious connection in Kirk, itself, that would lead a skilled artisan to arrive at Applicants' claimed invention, meaning that one of skill in the relevant art who reads Kirk would not be able to arrive at Applicants' claimed invention. Kirk does not teach any similar construction as taught by Applicants. The Examiner must show evidence of such a construction if one exists. Thus, Applicants' are able to achieve a different specified (100) surface without dangling bonds that Kirk is not capable of providing either by suggestion nor would there be motivation to arrive at Applicants' specified surface by reading Kirk. As such, Kirk is not obvious over the claimed invention. Applicants respectfully request the rejection under 35 U.S.C. §103(a) be removed and the application be allowed to proceed to allowance.

Conclusion

Pursuant to the filing of this Amendment and in light of the remarks and factual evidence presented with this paper, Applicants respectfully submit that the claims as provided in the Listing of Claims beginning on page 2 of this paper are in condition for allowance. Accordingly, favorable consideration for and allowance of such claims are respectfully requested.

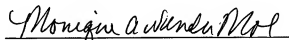
Fees that accompany a Petition for Extension of Time are provided herewith. No additional fees are believed due. If this is incorrect, the Commissioner is hereby authorized to charge those additional fees, other than the issue fee, that may be required by this paper to Deposit Account No. 07-0153.

Should the Examiner have any questions or comments, or if further consideration or clarification is required, it is requested that the Examiner contact the undersigned at the telephone number listed below.

Dated: April 28, 2008

Respectfully submitted,

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